

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337	)	WT Docket No. 99-87
Of the Communications Act of 1934, as amended	)	
	)	
Promotion of Spectrum Efficient Technologies	)	RM-9332
On Certain Part 90 Frequencies	)	

To: The Commission

**PETITION FOR RECONSIDERATION**

The Association of American Railroads ("AAR"), by its undersigned counsel and pursuant to Section 1.429 of the Commission's rules, hereby requests the Commission to reconsider its Second Report and Order in the above-captioned proceeding, FCC 03-34, released February 25, 2003 (hereafter "Second Report and Order"),<sup>1/</sup> and published in the Federal Register on July 17, 2003.<sup>2/</sup> In support, the following is shown:

**I. Statement of AAR's Interest and Summary of Position**

AAR is a voluntary non-profit membership organization whose freight members generate approximately 94% of the total operating revenues of all freight railroads in the U.S., operate 77% of the total line haul mileage, and employ 91% of all freight railroad

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<sup>1/</sup> AAR is filing simultaneously a Petition for Stay of the rules adopted by the Second Report and Order, pending action by the Commission on this Petition for Reconsideration.

<sup>2/</sup> 68 Fed. Reg. 42296-42314, July 17, 2003.

workers. In addition, Amtrak, the nation's principal intercity passenger railroad, is a member of AAR, as are numerous regional and short line railroads. AAR has been certified by the Commission as the exclusive frequency coordinator for the land mobile frequencies used by the railroad industry for dispatcher-to-train links, onboard communications, train-to-train communications, automatic train control systems and other industry-specific uses of spectrum. <sup>3/</sup>

Radio communications systems are a critical component of the nation's rail network, and are essential for safe operations. The importance of safety in the railroad industry is evident from the very nature of the day-to-day operations of the business, *i.e.*, the constant movement of people, heavy equipment and freight (including hazardous or toxic industrial materials). The safe and efficient operation of today's passenger and freight rail transportation networks would be impossible without reliable and effective mobile radio communications. <sup>4/</sup>

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<sup>3/</sup> See Frequency Coordination in the Private Land Mobile Radio Services, *Report & Order*, 103 FCC 2d 1093, ¶ 94 (1986); Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Services, *Second Report and Order*, 12 FCC Rcd 14307, 14324, 14330 (1997) ("*Second Report & Order*"), and *Second Memorandum Opinion and Order*, 14 FCC Rcd 8642, 8646-47 (1999) ("*Second Memorandum Opinion & Order*"); Waiver of the Commission's Rules to License Use of Six Conventional 900 MHz Frequency Pairs for Advanced Train Control System, *Order*, 3 FCC Rcd 427 (PRB 1988); and Modification of Licenses for Use in Positive Train Control Systems, *Order*, 16 FCC Rcd 3078 (WTB 2001).

<sup>4/</sup> The link between rail safety and radio is well established in Federal legislation and regulation. For example, pursuant to the 1992 Rail Safety Enforcement Act, 49 U.S.C. § 20103(a), the Department of Transportation, acting through the Federal Railroad Administration ("FRA"), has adopted regulations governing the use of radio for safety-related purposes in the rail industry. See, *e.g.*, 49 C.F.R. § 220.9 *et seq.*, prescribing radio communications requirements for locomotives, right-of-way crews, etc. See also, 49

For controlling train movements (which is the most important function for radio usage in the railroad industry),<sup>5</sup> there are two critical components of the mobile radio network: (1) the base station infrastructure deployed along the rights-of-way and (2) the mobile radio equipment in the locomotives. Because of the way the industry operates, any locomotive must be capable of communicating with any base station anywhere in the system, as described more fully below.

Although the nation's railroad business is conducted by a multiplicity of separate companies -- large freight railroads, regional and local "short line" operators, Amtrak, and local rail transit authorities -- the radio frequency infrastructure is, in operational terms, a single complex nationwide interrelated network. This is due to the track and equipment sharing arrangements between and among the freight railroads, as well as the track sharing arrangements between the freight railroads and commuter rail lines.

Locomotives and other rail vehicles owned by each railroad routinely travel on the tracks and through stations, yards and terminals owned by other railroad companies, and those locomotives and other vehicles must be in radio contact (via the closest base station within signal coverage range) with the appropriate rail dispatch centers and control centers of each "host" railroad at all times. The map attached to AAR's Comments filed previously in this proceeding (see Exhibit A attached hereto) shows the location of the

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C.F.R. § 232.19 *et seq.*, governing operation of radio-equipped one-way and two-way "end-of-train" devices for monitoring and activating brake systems aboard trains.

5 There are many other railroad operations that utilize land mobile radio channels, including specialized applications such as end-of-train devices that employ an onboard radio link, remote control links for synchronizing unmanned mid-train locomotives, and automatic defect detection devices that are deployed throughout the rail network, as well as communications between and among track crews, yard crews, and the like.

industry's more than 15,000 base stations, which are interconnected with each "host" railroad's dispatch and control center by means of long distance microwave and fiber networks. The point is important and bears repeating: operationally, this is a single, nationwide network. Although the base stations and control centers are owned and operated by different railroad companies, functionally they all comprise one radio network because of the requirement for nationwide interoperability among all railroads.

AAR's members have been actively planning for several years the railroad industry's migration from 25 kHz to 12.5 kHz mobile radio equipment, a task that is difficult, complex and very expensive. Although the Commission's ultimate migration deadline of January 1, 2013 is acceptable to the railroad industry, it is AAR's position that the interim dates adopted by the Commission will be extremely burdensome and problematic for the railroads, and AAR urges the Commission to reconsider them.

## **II. Argument**

In its Comments filed in this rulemaking proceeding on March 5, 2001 (a copy of which is attached as Exhibit A), AAR explained why the rule proposed by American Mobile Telecommunications Association (AMTA) for mandatory conversion dates from wideband (25 kHz) radios to narrowband (12.5 kHz) radios should not be applicable to the railroads. AAR demonstrated in its Comments that the railroad industry's mobile radio network was unique among all land mobile radio user groups<sup>6</sup> in terms of its size,

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<sup>6</sup> The vehicular fleets of other land mobile user groups are local or regional in nature and are much smaller in terms of numbers of vehicles per fleet, which makes the transition to narrowband radios much simpler. In contrast, the railroad industry's

geographic scope, and complexity of operation, and that these factors required a flexible approach to the migration from wideband to narrowband technology, unconstrained by artificial deadlines such as those proposed by AMTA.

Nowhere in the Second Report and Order did the Commission either acknowledge AAR's showing concerning the unique characteristics of the railroads' mobile radio network or address whether those features justified an exemption from mandatory conversion deadlines as requested by AAR. Instead, the Commission adopted two mandatory conversion deadlines: January 1, 2013, for all non-public safety licensees, including railroads; and January 1, 2018, for public safety licensees. Importantly (and unfortunately), the Commission also adopted three interim deadlines leading up to the final deadline for narrowband conversion for non-public safety licensees, namely:

- (1) A prohibition against any applications for new or modified stations using 25 kHz channels beginning six months after Federal Register publication (*i.e.*, January 13, 2004);
- (2) A prohibition against the certification of any equipment capable of operating at one voice path per 25 kHz beginning January 1, 2005; and
- (3) A prohibition against the manufacture or importation of any equipment that can operate on a 25 kHz bandwidth beginning January 1, 2008.

The staff of the Commission's Wireless Telecommunication Bureau is well aware that the railroad industry has undertaken extensive planning and expenditures to

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locomotive fleet (approximately 30,000 vehicles) is, operationally, a nationwide fleet, which vastly complicates the transition dynamics. *See* Exhibit A at 3-4.

accomplish a coordinated, industry-wide conversion to narrowband technology.<sup>7</sup> After thorough review and analysis of the potential impact of the Second Report and Order on the industry's present transition plans, AAR's members have reached the conclusion that the final migration deadline of January 1, 2013, is acceptable. However, the railroads believe very strongly that the three interim deadlines in 2004, 2005 and 2008 are unnecessary and will complicate, not facilitate, the railroad industry's migration to 12.5 kHz equipment.

Particularly harmful to the railroads is the six-month deadline after which no applications for new or modified stations employing 25 kHz bandwidth will be allowed.<sup>8</sup> This cut-off date will prevent the future deployment of dual-bandwidth radios (*i.e.*, those capable of switchable operation in either 12.5 kHz or 25 kHz bandwidths),<sup>9</sup> thus depriving the railroad industry of a vital tool necessary for a flexible and successful

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<sup>7</sup> See, *e.g.*, briefings on December 12, 2000 and November 27, 2001, presented by AAR to the staff of the Wireless Telecommunications Bureau concerning the narrowband channel plan adopted by the rail industry in April 2000 and deployment the narrowband trunking pilot project sponsored by Oregon Department of Transportation (ODOT) and U.S. Department of Transportation; Comments of AAR in response to FCC Public Notice, DA 02-361 ("Current and Future Spectrum Use by the Energy, Water and Railroad Industries"), filed March 6, 2002, Attachment A at pages 15-18; and AAR Opposition filed in RM No. 10687 (Informal Request for Frequency Coordinator Certification), filed April 23, 2003, at 8-9.

<sup>8</sup> Section 90.209(b)(6) of the Commission's rules, 47 C.F.R. ¶ 90.209(b)(6). For ease of reference throughout this petition, the phrase "12.5 kHz bandwidth" is meant to be synonymous with the phrase "11.25 kHz authorized bandwidth" as used in the rule.

<sup>9</sup> Motorola, the party that originally proposed a six-month cut-off date, would have allowed the continued deployment of "multi-bandwidth mode equipment," *i.e.*, radios "with a maximum channel bandwidth of 25 kHz [that are also] capable of operating on channels of 12.5 kHz or less." See Comments of Motorola in WT Docket No. 99-87, filed March 5, 2001, at 6. Instead of adopting Motorola's recommendation, the

transition from wideband to narrowband technology. Because of the size, nationwide scope and interoperable nature of the railroads' mobile radio network, it is absolutely essential that the railroads be permitted to deploy dual bandwidth radios for the foreseeable future to enable the railroads to accomplish the migration in an orderly and safe manner. For the reasons described below, the six-month deadline will force the railroads to operate with mixed bandwidths, which may have serious adverse effects on communications throughput.

There are two key facts pertaining to the railroad industry that cause the six-month deadline to be highly problematic for AAR's members. First, new base stations are continually and routinely being added to the railroads' mobile radio infrastructure to accommodate changing operational requirements such as dispatcher territory re-alignments, changes in regional boundaries, addition of large customers in territory that previously was unserved, mergers and acquisitions, installation of additional defect detection equipment, and major construction or maintenance projects. The radios that are currently being installed for new railroad base stations have dual bandwidth capability, that is, they are capable of switchable operation in either 12.5 kHz or 25 kHz bandwidth.

The second key fact is that the railroad industry's nationwide locomotive fleet (approximately 30,000 vehicles) cannot possibly be converted to 12.5 kHz capability by

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Commission, acting *sua sponte*, adopted a rule that will prohibit the installation of *any* radio with 25 kHz capability (even a dual bandwidth radio) after January 13, 2004.

January 13, 2004 – indeed, at the present time, there is *no* 12.5 kHz locomotive radio available from *any* land mobile radio equipment manufacturer.<sup>10</sup>

The combination of these two key facts means that if a particular railroad needs to add a new base station along its right-of-way in February 2004 to accommodate a re-alignment in dispatcher coverage, for example, that new base station must be limited to operating with 12.5 kHz bandwidth according to the Commission's new rule. But the nationwide locomotive fleet will still be operating with 25 kHz radios, which means that every communication between that new base station and all locomotives within its range will necessarily be in mixed mode, *i.e.*, wideband-to-narrowband and vice versa.

The railroad industry and its safety regulator, the Federal Railroad Administration (FRA), have been concerned for some time about the possible degradation of communications performance as a result of mixed mode operation. Recently the FRA commissioned a study of the effects of such operation by the Institute for Telecommunications Sciences (ITS) of the National Telecommunications and Information Administration (NTIA). As indicated in the summary of the NTIA/ITS findings (attached hereto as Exhibit B), mixed mode operation can be expected to cause a decrease in audio volume when a wideband receiver (onboard a locomotive) receives a

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<sup>10</sup> The mobile radio found aboard a locomotive is not a garden-variety mobile radio such as the typical dash-mounted radio installed in a police cruiser, taxicab or similar automotive-type vehicle. Instead, the locomotive radio has special "form, fit and function" requirements owing to unique specifications for power supply, onboard connections, operator ergonomics, and the need for interoperability across the entire railroad industry. The locomotive radio, therefore, is the subject of specialized railroad industry standards and specifications. AAR has been advised that the first locomotive radios capable of 12.5 kHz operation will not be available from manufacturers until the fourth quarter of this year. Those radios will be capable of switchable dual bandwidth operation (25 kHz and 12.5 kHz).



narrowband signal (from a “new ” 12.5 kHz base station); and conversely, when the narrowband base station receives a wideband signal from the locomotive radio, there may be distortion in the form of “mute signal,” “choppy speech,” or “fuzzy” audio.<sup>11</sup> In addition, there is the prospect of decreased coverage and an issue of adjacent channel interference resulting from mixed mode operation.<sup>12</sup>

Because the quantity of mobile radios in service in the rail industry is so vast (over 15,000 base stations nationwide, over 45,000 mobile radios (including locomotive radios), and more than 125,000 portables), it will be necessary to change the equipment over an extended period of time, during which the old wideband and new narrowband radios will have to be intermixed in such a way as to not affect existing train operations and rail service. Careful analysis of the consequences of mixed bandwidth operations will be necessary to avoid the types of problems predicted by the recent NTIA/ITS/FRA study described above and attached hereto. Depending on factors such as topography, signal strength, tower location, antenna height, and the like, different operating scenarios may be needed for different locations. For example, in certain railroad operating territories where there is no perceptible degradation in communications, it may be appropriate to operate in mixed mode during the transition period, whereas in other

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<sup>11</sup> See Exhibit B, “Investigations Performed for Federal Railroad Administration Regarding Wideband-to-Narrowband Migration and Its Effects on VHF Land-Mobile Radio Voice Communications,” at 3. See also, the written *ex parte* presentation in WT Docket No. 99-87 by representatives of AAR, Union Pacific Railroad, CSX Transportation Company and the Federal Railroad Administration, “Adverse Effects of Narrowband Deadlines on the Railroad Industry,” June 25, 2003, at 6-7.

<sup>12</sup> Id. at 4. The audio files indicated at the speaker icons shown at page 13 of the NTIA/ITS summary are not accessible in the paper or electronic “PDF” versions of this

circumstances it may be necessary to operate a new (dual bandwidth) base station in wideband mode until all locomotives have been made narrowband-capable. Either way, it is essential that the railroad industry be permitted to deploy switchable dual bandwidth radios (both base and mobile) in order achieve flexibility and “backward compatibility” during the complex transition from wideband to narrowband technology. For this reason, AAR requests the Commission to reconsider the cut-off date of January 13, 2004, in Section 90.209(b)(6) of the rules to enable licensees to install dual bandwidth radios during the period leading up to the conversion deadline of January 1, 2013.

AAR believes that the other two interim deadlines also should be reconsidered by the Commission. Having established the ultimate deadline for narrowband conversion of January 1, 2013, it is better for the Commission to afford all affected parties – licensees, radio manufacturers, system integrators and design engineers – maximum flexibility to work together to accomplish the migration in the manner that suits them best, rather than imposing arbitrary constraints and deadlines on equipment suppliers. In this regard, the January 2005 cut-off date for certification of radios capable of operating with bandwidth greater 12.5 kHz,<sup>13</sup> as well as the January 2008 cut-off date for the manufacture or importation of radios with bandwidth greater than 12.5 kHz,<sup>14</sup> will inhibit flexibility during the migration period by precluding the availability of dual bandwidth radios – radios which, as described above, will be absolutely essential to ensure “backward

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filing. If the Commission staff is interested in reviewing those audio files, AAR would be pleased to make them available to the staff in an accessible format.

<sup>13</sup> 47 C.F.R. ¶ 90.203(j)(4)(ii).

<sup>14</sup> 47 C.F.R. ¶ 90.203(j)(10).


compatibility” for an orderly transition during the railroad industry’s nationwide migration from wideband to narrowband equipment.

### III. Conclusion

Wherefore, AAR respectfully requests the Commission to reconsider the rules adopted in the Second Report and Order in a manner consistent with the positions set forth herein.

Respectfully submitted,

ASSOCIATION OF AMERICAN RAILROADS

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Date: August 18, 2003

- Exhibit A: Comments filed by AAR in WT Docket No. 99-87 on March 5, 2001  
(including map showing railroad industry’s nationwide base station network)
- Exhibit B: “Investigations Performed for the Federal Railroad Administration Regarding Wideband-to-Narrowband Migration and Its Effects on VHF Land Mobile Communications,” Institute for Telecommunications Sciences, National Telecommunications and Information Administration, August 2003

**EXHIBIT A**

**TO**

**PETITION FOR RECONSIDERATION**

**OF**

**ASSOCIATION OF AMERICAN  
RAILROADS**

**WT DOCKET NO. 99-87**

**AUGUST 18, 2003**

Before the  
Federal Communications Commission  
Washington, D.C. 20554

MAR 5 2001

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of	)	
Implementation of Sections 309(j) and	)	
337 of the Communications Act of 1934	)	WT Docket No. <u>99-87</u>
as Amended	)	
Promotion of Spectrum Efficient	)	
Technologies on Certain Part 90	)	RM-9332
Frequencies	)	
Establishment of Public Service Radio	)	
Pool in the Private Mobile	)	RM-9405
Frequencies Below 800 MHz	)	
Petition for Rule Making of The American	)	
Mobile Telecommunications Association	)	RM-9705
	)	
To: The Commission	)	

**COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS**

The Association of American Railroads ("AAR"), by its undersigned counsel, pursuant to section 1.415 of the rules of the Federal Communications Commission ("Commission")<sup>1</sup> hereby submits its comments in response to the *Further Notice of Proposed Rule Making* in the above captioned proceeding.<sup>2</sup>

AAR is a voluntary, non-profit organization composed of Class I member railroad companies operating in the United States, Canada and Mexico. AAR is the joint representative and agent of these railroads in connection with federal regulatory

<sup>1</sup> See 47 C.F.R. § 1.415.

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<sup>2</sup> *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, Report and Order and Further Notice of Proposed Rule Making, (FCC 00-403), (released November 20, 2000) ("Notice").*

matters of common concern to the industry as a whole, including matters pertaining to regulation of communications.

I. **Nature of the Railroads' Interest**

The North American railroad industry deploys and depends upon a comprehensive and sophisticated network of fixed and mobile communications systems to carry voice and data traffic which is integral to the minute-to-minute management and control of train movements throughout the rail network. These systems are vital to ensuring safety on the nation's railroads. The railroads use mobile radio channels for transmitting voice and data communications to and from crews in locomotives and for controlling and monitoring rail switches and signals, and also for communications to, from, and among track workers and personnel assigned to maintaining the railroad right-of-way. The fixed point-to-point microwave systems are used to interconnect the trackside mobile radio facilities with the centralized dispatching center in each railroad's operating region. These systems also carry communications to advise of dangerous conditions and, if necessary, bring train movements to a halt to prevent unsafe operation. The radio communications links between trains and central dispatchers provide immediate information on the location, direction and speed of hundreds of trains operating at the same time on each major railroad in the country, and are essential to protect railroad employees and the general public.

Because the railroads rely so heavily on radio communications to ensure the safe and efficient operation of the nation's railways, AAR has a vital interest in this proceeding.

II. **The AMTA Proposal Would Impose a Significant and Unnecessary Burden on the Rail Industry.**

Under the proposal of the American Mobile Telecommunications Association (AMTA), all non-public safety licensees would be required to convert to equipment that provides the efficiency equivalent of one voice path per 12.5 kHz channel.<sup>3</sup> The AMTA proposal would phase in the spectrum efficiency requirement over time, beginning in 2003 in the top 50 markets and ending in 2020 when rural areas would become subject to the standard.<sup>4</sup>

Imposing a date certain for implementation of the spectrum efficiency requirement would impose a significant and unnecessary burden on the railroad industry. While AMTA's phased approach to spectrum efficiency would appear to ease the burden on licensees by granting a reasonable period for the transition, it would in effect require the railroads to complete a nationwide migration to 12.5 kHz technology by 2003. This is because the railroad fleet of locomotives and related track equipment is a nationwide, inter-operating system encompassing rural and urban areas alike. Trains operating in the most densely populated and urban areas must also travel to, from, and through sparsely populated rural areas. These trains must have access to radio communications,<sup>5</sup> which in turn requires that compatible technology be deployed in all areas of the country to ensure interoperability.

In this regard, the railroad mobile communications network is vastly different from those of other private mobile radio licensees, and this difference has a direct

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<sup>3</sup> See Notice at ¶ 137.

<sup>4</sup> *Id.*

<sup>5</sup> See regulations of the Federal Railroad Administration requiring that trains be equipped with a "working radio." 49 C.F.R. Sections 220.5 and 220.9.

impact on the ease with which the railroads can change from one technology to another, as compared to other user groups. The vehicular fleets of most licensees are local or regional in nature and are smaller in terms of the number of vehicles per fleet. For such users, radios in an entire fleet of vehicles can be changed over the course of a weekend, for example. In contrast, the railroad fleet is essentially nationwide in scope because of the need for interoperability of radios due to equipment-sharing and track-sharing agreements between railroad companies. It is virtually impossible to change out the entire population of mobile radios in the rail industry "overnight."

As the Commission's staff is aware,<sup>6</sup> the railroad communications network covers vast geographic areas and is technically complex (a map indicating US railroad VHF base station locations is attached as Exhibit A). This system includes: more than 16,000 base stations,<sup>7</sup> 90,000 mobile radios, 125,000 portable radios, 5,000 radio-equipped trackside defect detectors, 21,000 "End-of-Train/Head-of-Train" devices, and 1,000 mid-train locomotive control radios.<sup>8</sup> Converting of all of this equipment to a narrowband platform will be enormously complex, and AAR urges the Commission to maintain the present policy adopted in the "refarming" proceeding whereby spectrum efficiency is achieved through the equipment type acceptance

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<sup>6</sup> On December 12, 2000, AAR presented a railroad industry communications briefing to the staff of the Public Safety and Private Wireless Division.

<sup>7</sup> All numbers are approximate.

<sup>8</sup> The Federal Railroad Administration has adopted regulations governing "End-of-Train/Head-of-Train" radio frequency devices (49 C.F.R. Sections 232.19-232.25), as well as regulations governing deployment of radio communications in general throughout the rail network (49 C.F.R. Part 220).



process, thus affording licensees flexibility in implementing the transition to new technology. This policy will ultimately achieve desired levels of spectrum efficiency without placing an undue burden on the nation's railroads.

Although AAR opposes a forced conversion to spectrally efficient equipment by a "date certain," AAR recognizes the need for users of the radio spectrum to take steps to use this valuable national resource more efficiently. The railroad industry has several initiatives currently underway that are leading toward a nationwide upgrade to spectrally efficient technology. AAR's members have adopted the APCO Project 25 digital modulation technology as the nationwide integrated voice and data platform, and have developed and formally adopted a VHF channel plan that will optimize the efficient use of the railroad spectrum allocations.

The railroad industry is currently conducting a pilot program in cooperation with the Federal Railroad Administration, NTIA and the Oregon Department of Transportation ("ODOT"), to test and evaluate the transition to the Project 25 platform. Once the ODOT pilot is complete and the results evaluated, the industry will be in a position to develop a comprehensive migration path plan. This process will ensure that the transition of the railroad radio system to spectrally efficient digital technology will be accomplished in the most efficient and least disruptive manner. Obviously, such a managed transition is much preferred over a transition necessitated to meet an arbitrary regulatory deadline.

### **III. Conclusion**

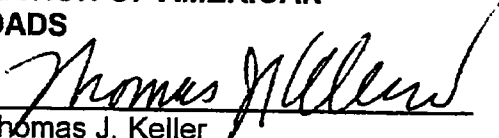
AAR urges the Commission to preserve the transition policies adopted in the "refarming" proceeding that will achieve desired levels of spectrum efficiency without placing an arbitrary and undue burden on the nation's railroads. The railroads have

already incorporated these policies into their communications system planning, and are in the process of moving toward a nationwide upgrade of their radio networks to more efficient digital technologies. A mandated transition by a date certain is therefore unnecessary and inappropriate for the railroads. AAR respectfully suggests that, if the Commission is inclined to adopt a mandatory transition deadline for users of the spectrum covered by the "refarming" proceeding, the railroads should be exempt from such a deadline in light of the special and unique circumstances described herein.

Respectfully submitted,

**ASSOCIATION OF AMERICAN  
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Date: March 5, 2001

Attachment: Exhibit A

# COMBINED MOBILE RADIO NETWORK OF RAILROADS IN THE UNITED STATES

LOCATION OF VHF BASE STATIONS (160 MHz)

